

IN THE CLAIMS

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Claims 1-31. (Cancelled)

32. (New) A method for bactericidal treatment of bulk food storage containers for fresh produce, the method comprising the steps of:

a. producing an electrochemically activated, bactericidal aqueous solution by means of an electrolysis device, said electrolysis device having a through-flow electrochemical cell with two co-axial cylindrical electrodes with a co-axial diaphragm between the two electrodes so as to separate an inter-electrode space into a catholyte chamber and an anolyte chamber, the electrolysis device being such that an oxidant-containing anion-containing solution and a reductant, cation-containing solution are produced separately; and

b. treating a container with at least one of said solutions, either concurrently or successively.

33. (New) The method according to claim 32 further comprising packing fresh produce in ice in the container, wherein the ice is made from the electrochemically activated, bactericidal, aqueous solution.

34. (New) The method according to claim 32 wherein the solution is produced from an about 3% to 10% aqueous salt solution which has been subjected to

electrolysis to produce mixed reductant and mixed oxidant species.

35. (New) The method according to claim 34 wherein the species are labile and wherein the species disappear after about 96 hours with substantially no residues produced.

36. (New) The method according to claim 32 wherein the anion-containing solution has a redox potential of between about +450 mV and +1200 mV and a pH of between about 2 and 9.

c1 37. (New) The method according to claim 32 wherein the anion-containing solution includes mixed oxidant species selected from the group consisting of  $\text{ClO}$ ,  $\text{ClO}^-$ ,  $\text{HClO}$ ,  $\text{OH}^-$ ,  $\text{HO}_2^-$ ,  $\text{H}_2\text{O}_2$ ,  $\text{O}_3$ ,  $\text{S}_2\text{O}_8^{2-}$  and  $\text{Cl}_2\text{O}_8^{2-}$ .

38. (New) The method according to claim 32 wherein the cation-containing solution has a pH of between 7 and 13 and a redox potential of between about -200 mV and -900 mV.

39. (New) The method according to claim 32 wherein the cation-containing solution includes mixed reductant species selected from the group consisting of  $\text{OH}^-$ ,  $\text{H}_3^+$ ,  $\text{O}_2^-$ ,  $\text{H}_2$ ,  $\text{HO}_2^-$ , and  $\text{O}_2$ .

40. (New) The method according to claim 32

wherein the physical characteristics of the anion-containing solution and the cation-containing solution are adjustable for a particular produce application.

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41. Fresh produce which has been treated with an electrochemically activated, bactericidal aqueous solution during storage in a bulk food storage container wherein an electrochemically activated, bactericidal aqueous solution is produced in an electrolysis device having a through-flow electrochemical cell with two co-axial cylindrical electrodes with a co-axial diaphragm between the two electrodes so as to form a catholyte chamber and an anolyte chamber so that the electrochemically activated bactericidal aqueous solution comprises separate anolyte and catholyte solutions, the anolyte solution contains an oxidant and the catholyte contains a reductant, and wherein the fresh produce has been treated with at least one of the anolyte solution and the catholyte solution, either concurrently or successively.

42. (New) A bulk food storage facility comprising a bulk food storage container for fresh produce, wherein the facility comprises an electrolysis device having a through-flow electrochemical cells with two co-axial cylindrical electrodes with a co-axial diaphragm between the two electrodes so as to form a

separate anolyte chamber and a separate catholyte chamber, such that the electrochemically activated bactericidal aqueous solution comprises at least one of an oxidant containing anolyte solution and a reductant containing catholyte solution.

43. (New) The bulk food storage facility according to claim 42 further comprising means for freezing the aqueous solution.

C<sup>1</sup> 44. (New) A transporter having a bulk food storage container for transporting fresh produce, wherein the transporter is provided with an electrolysis device having a through-flow electrochemical cells with two co-axial cylindrical electrodes with a co-axial diaphragm between the two electrodes so as to form a separate anolyte chamber and a separate catholyte chamber, such that the electrochemically activate bactericidal aqueous solution comprises at least one of an oxidant containing anolyte solution and a reductant containing catholyte solution.

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